

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
18 May 2006 (18.05.2006)

PCT

(10) International Publication Number
WO 2006/052042 A1(51) International Patent Classification⁷: B82B 3/00(21) International Application Number:
PCT/KR2004/003088(22) International Filing Date:
26 November 2004 (26.11.2004)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2004-0091240
10 November 2004 (10.11.2004) KR

(71) Applicant (for all designated States except US): YONSEI UNIVERSITY [KR/KR]; 134, Sinchon-dong, Seodaemun-gu, Seoul 120-749 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): CHEON, Jin-Woo [KR/KR]; #213-803, Mokdong-2cha Wooseong Apt., Sinjeong 7-dong, Yangcheon-gu, Seoul 158-050 (KR). SEO, Jung-Wook [KR/KR]; #204-307, Jukong 2 complex

Apt., Junggye 4-dong, Nowon-gu, Seoul 139-224 (KR).
LEE, Jae-Hyun [KR/KR]; #116-204, Hansin-Plus-Hu
Apt., Haengdang 1-dong, Seongdong-gu, Seoul 133-798 (KR).

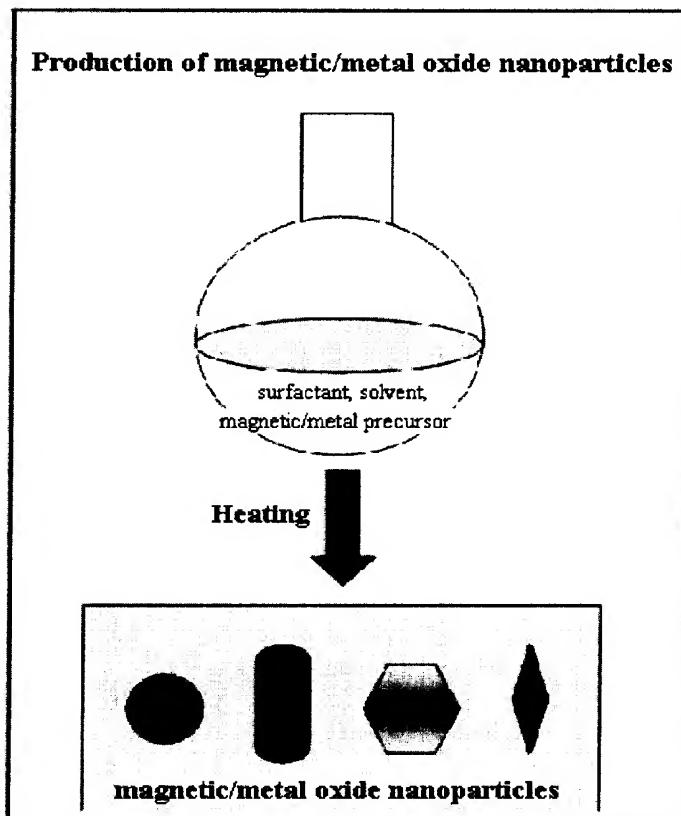
(74) Agents: LEE, Sei-Jin et al.; 17th Floor, City Air Tower, 159-9 Samsung-dong, Gangnam-gu, Seoul 135-973 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

[Continued on next page]

(54) Title: PREPARATION METHOD OF MAGNETIC AND METAL OXIDE NANOPARTICLES



(57) Abstract: This invention relates, in general, to a method of producing magnetic oxide nanoparticles or metal oxide nanoparticles and, more particularly, to a method of producing magnetic or metal oxide nanoparticles, which comprises (1) adding a magnetic or metal precursor to a surfactant or a solvent containing the surfactant to produce a mixed solution, (2) heating the mixed solution to 50 - 600°C to decompose the magnetic or metal precursor by heating so as to form the magnetic or metal oxide nanoparticles, and (3) separating the magnetic or metal oxide nanoparticles. Since the method is achieved through a simple process without using an oxidizing agent or a reducing agent, it is possible to simply mass-produce uniform magnetic or metal oxide nanoparticles having desired sizes compared to the conventional method.



FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*